III. REMARKS

In the Office Action, Claims 1-4, 7-10, 13-16 and 19-23 were rejected under 35 U.S.C. 102 as being anticipated by Bergstrom (US 5,794,185) for reasons set forth in the Action. Claims 5-6, 11-12 and 17-18 were rejected under 35 U.S.C. 103 as being unpatentable over Bergstrom in view of Steimle (US 6,377,941), and claims 22-23 were rejected under 35 U.S.C. 103 over Bergstrom in view of Agarwal (US 5,729,691) for reasons set forth in the Action.

It is noted that much of the foregoing rejections, based on prior art, are repeated from the previous Office Action, which, in turn, are repeated from a still earlier Action.

The examiner (bottom paragraph of page 17 of the Action) notes that while there may be a difference between the present invention and Bergstrom, this difference is not considered to be set forth within the claims. The examiner further states that the Bergstrom weights are to be considered in essence as a pattern and, that with respect to normalization, the present claims do not set forth a difference over Bergstrom. The examiner notes further that the training data of Bergstrom is a succession of input data since the data must be input to the Bergstrom system.

In accordance with the foregoing rationale, the examiner rejects numerous elements of the independent claims over the teachings of various passages found in Bergstrom. This may be demonstrated with respect to portions of Claim 1.

With respect to the method step of applying the input pattern for each of a succession of input signals to a normalizer that

computes a main factor, the examiner (top of page 3 of the Action) cites Bergstrom col. 5 at lines 40-46, which teaches a classifier trained on a large labeled database in excess of 10,000 speech frames in order to ensure good performance.

With respect to the method step of applying the normalized pattern for each of the succession of input signals and the category associated thereto by the user to a classifier.., the examiner (second paragraph on page 3 of the Action) cites Bergstrom col. 5 at lines 40-46, which teaches the aforementioned classifier trained on the large database, as well as Fig. 1 at item 310 (encoding degree of periodicity) and col. 16 at lines 61-64 that teaches down-sampling of a normalized filtered excitation waveform, as well as col. 18 at lines 51-55 that teaches scalar quantizing a degree of periodicity. Other than the appearance of terms "classifier" and "normalized" in the cited passages, there appears to be nothing that would suggest the operation of the present invention.

For the method step of "classifying individual ones of said input signals following said first input signal by use of the stored prototype of said first input signal", reference is made by the examiner (at the end of the third paragraph in page 3 of the Action) to the passage in Bergstrom (col. 16 at lines 56-64) that teaches the aforementioned down-sampling of a normalized filtered excitation waveform. This clearly is not a teaching of the quoted step of claim 1.

It is emphasized that the claimed use of the stored prototype for the foregoing classifying step is not discussed in the cited passages of Bergstrom. This specific point is not addressed by the examiner in the above-mentioned paragraph at the bottom of page 17 of the Action. Possibly the examiner regards the cited

Bergstrom passage (col. 16 at lines 9-11, referred to by the examiner at the beginning of the third paragraph in page 3 of the Action) as covering the classifying step since this passage of Bergstrom teaches a storing of the normalized epoch segment to memory for later encoding.

The classifying step is an important part of the invention, as is explained in the present specification. As stated on page 7 at lines 17-22, it is an object of the invention to provide a method and circuits for encoding an input pattern in the learning phase using a normalizer and a classifier that reduce the number of required prototypes. As stated on page 8 at lines 14-17, if an input signal pattern, after normalization, is not recognized by the classifier, it is stored as a prototype. The prototypes are used in the classification stage, wherein unknown normalized input signal patterns are compared (page 16 at line 5, and page 17 at line 8) with the stored prototypes.

The utilization of certain ones of the input signal patterns as prototypes, to be compared with other ones of the input signal patterns, is not taught by Bergstrom. In contradistinction, Bergstrom teaches away from the foregoing feature of the present invention, wherein Bergstrom (col. 5 at lines 16-17) teaches use of neural weights derived off line.

It is noted that the examiner combines Bergstrom with Steimle for rejection of certain claims, wherein Steimle is relied upon to teach ANN methods and circuits that automatically compute the distance between input pattern and stored prototypes (page 15 of the Action). Bergstrom and Agarwal are combined to reject other claims wherein Agarwal is relied upon to teach (page 17 of the Action) a computer-implemented process or apparatus encoded with machine-readable program code. Combination of the Steimle and

Agarwal teachings with Bergstrom does not alter the foregoing argument, which argument is believed to show Bergstrom considered alone or in combination with the teachings of Steimle and Agarwal do not teach the present invention.

In order to emphasize the distinction between Bergstrom and the present invention, the independent claims 1, 7, 13 and 19-23 are amended to recite the inventive feature of comparing an input signal pattern with a stored prototype. The specific wording of the amendment in the respective claims varies to fit the context of the respective claims. This is believed to emphasize that the present invention utilizes certain ones of the input signal patterns as prototypes, to be compared with other ones of the input signal patterns, which is contrary to the teaching of Bergstrom considered alone or in combination with the other references.

Accordingly, the amendment to the independent claims 1, 7, 13 and 19-23 is believed to distinguish the claimed subject matter from the teachings of the cited art, thereby to overcome the rejections of these claims and their respective dependent claims under 35 U.S.C. 102 and 103, and to provide allowable subject matter in the claims. It is requested also that the examiner reconsider arguments made in the previous responses in view of the present amendment.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

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